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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,363	10/17/2001	Shu Lin Tai		7772
25859	7590	06/28/2005	EXAMINER	
WEI TE CHUNG FOXCONN INTERNATIONAL, INC. 1650 MEMOREX DRIVE SANTA CLARA, CA 95050			TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/982,363

Applicant(s)

TAI, SHU LIN

Examiner

Dzung D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 01/24/2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan US patent no. 6,249,625 in view of Li US patent no. 6,477,289.

Regarding claims 1, 8 and 17, Pan discloses in figure 4A an optical add-drop multiplexer comprising:

a first ferrule 38 with an input optical fiber 40 and an output optical fiber 41 stationed therein;

a first graded index (GRIN) lens 46;

a bandpass filter 47 having a particular central wavelength;

a second graded index lens 48;

a second ferrule 49 having an adding optical fiber 43 and an dropping optical fiber 42 stationed therein;

wherein the first graded index lens 46, the bandpass filter 47 and the second graded index lens 48 are successively placed between the first 38 and the second ferrules 49, an optical multiplexed signal from the input optical fiber is transmitted to the bandpass filter (col. 4, line 51), from which an optical signal having a wavelength

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identical to the central wavelength of the bandpass filter is output to the dropping optical fiber, and other optical signals having other wavelengths are coupled with an optical signal from the adding optical fiber having a wavelength identical to the central wavelength of the bandpass filter and are transmitted to the output optical fiber (figures 4, col. 4, lines 45-63). Pan differs from claim 1 of the invention in that Pan does not disclose an optical crystal. Li, from the same field of endeavor, discloses an add/drop multiplexing having a refractive element 102 (equivalent to optical crystal, see McLeod et al. US Publication no. 2002/0171931, paragraphs 0038, 0040). Since a refractive element 102 of Li does the same function as claimed optical crystal that is for redirect the filtered signal and for achieve a signal switching function (col. 3, lines 60-61). At the time of the invention was made, it would have been obvious to an artisan at the time of the invention was made to include the teaching of Li in the apparatus of Pan in order to provide for the separation of the wavelengths carried in an optical fiber in a straightforward spatially compact, optical efficient, and low cost system.

For claim 8, Pan discloses bandpass filter 47 is a wavelength dependent filter (col. 5, line 22-23) that is the bandpass filter 47 capable to pass any selective wavelength from the WDM signal. For claim 17, Li clearly shown in figure 5, a refractive element 102 (same as optical crystal) (col. 7, line 31) positioned between the first GRIN lens and second GRIN lens.

Regarding claim 2, Li further disclose bandpass filter is a thin-film filter (col. 6, lines 10-14).

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Regarding claims 3 and 4, Li shown in figure 5, the bandpass filter 118 is attached on the first graded index lens 108.

Regarding claims 5 and 6, Li discloses in figure 5, a refractive element 102 is a pentagon. However, whether to use a refractive element as a pentagon or a hexagon or an egg-timer shaped hexagon is merely an engineering design choice that is for redirect the filtered signal and for achieve a signal switching function (col. 3, line 55 to col. 4, line 2).

Regarding claim 7, Pan shown in figure 4B, the first 62 and the second ferrules 68 each define two holes with two optical fibers respectively stationed therein.

3. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan US patent no. 6,249,625 in view of Li US patent no. 6,477,289 and further in view of Chang et al US patent no. 6,792,211.

Regarding claim 18, as per claims above Pan and Li disclose all the limitation except for wherein more than one units are assembled sequentially one another, and wherein the first output fiber of one unit is connected to the first input fiber of the next unit, and the second output fiber of said one unit is connected to the second input fiber of the said next unit. Chang, from the same field of endeavor, discloses a compact optical wavelength add/drop multiplexer having more than one units are assembled sequentially one another, and wherein the first output fiber of one unit is connected to the first input fiber of the next unit, and the second output fiber of said one unit is connected to the second input fiber of the said next units (see figures 3A, 3B). At the

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time of the invention was made, it would have been obvious to an artisan at the time of the invention was made to include the teaching of Chang in the combination of Pan and Li. One of ordinary skill in the art would have been motivated to do this in order to provide a simpler and more reliable system for optical add/drop multiplexing in a fiber optic (col. 1, lines 65-67).

Regarding claim 19, Chang further discloses the filter of each unit defines its own center wavelength different from those of other units (col. 3, lines 39-59).

Regarding claim 20, Chang shown in figures 3A and 3B, the first input fiber 33A and the second input fiber 36A of the first unit 31A, and the first output fiber 34B and the second output fiber 35B of the last unit 31B are communicative with an exterior.

4. Claims 9-16 are allowed.

### ***Response to Arguments***

5. Applicant's arguments filed on 01/24/2005 have been fully considered but they are not persuasive.

**A Rejection of claims 1, 8 and 17 under USC § 103(a) as being unpatentable over Pan (US patent no. 6, 249,625) in view of Li (US patent no. 6,477,289).**

Applicant argues that Li does not disclose or suggest that the refractive element 102 is an optical crystal as recited in claim 1 of the present invention. However Li, from the same field of endeavor, clearly discloses an add/drop multiplexing having a

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refractive element 102 (equivalent to optical crystal, see McLeod et al. US Publication no. 2002/0171931, paragraphs 0038, 0040). Since a refractive element 102 of Li does the same function as claimed optical crystal that is for redirect the filtered signal and for achieve a signal switching function (col. 3, lines 60-61).

In response to applicant's arguments against the references individually such as Li fails to disclose, teach or suggest that the refractive element 102 can be used in the add/drop multiplexer of Pan, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues that Pan fails to disclose "other optical signals having other wavelengths are coupled with an optical signal from the adding optical fiber having a wavelength identical to the central wavelength of the bandpass filter and are transmitted to the output optical fiber". However, figures 4 and col. 4, lines 45-63 clearly disclose the limitation above.

**B      Rejection of claims 18-20 under USC § 103(a) as being unpatentable over Pan ( US patent no. 6, 249,625) in view of Li (US patent no. 6,477,289) and further in view of Chang et al (US 6,792,211).**

Applicant argues thatching fails to disclose "the second output fiber of said one unit is connected to the second input fiber of said next unit". However, figures 3A and 3B of Chang clearly shown fiber 35A is connected one unit to another.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

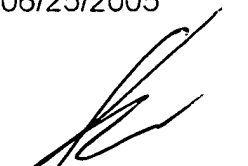
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran  
06/25/2005



**KENNETH VANDERPUYE**  
**PRIMARY EXAMINER**

**KENNETH VANDERPUYE**  
**PRIMARY EXAMINER**